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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/558,432

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Seung-Myun Baek

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EXAMINER

WYLLIE, CHRISTOPHER T

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/558,432	Applicant(s) BAEK ET AL.	
	Examiner CHRISTOPHER T. WYLLIE	Art Unit 2465	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,6,8,10 and 12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,6,8,10 and 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>07/02/2009; 07/24/2009; 10/02/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED OFFICE ACTION

1. This action is responsive to the communication received September 23rd, 2009. Claims 1, 4, 6, 8, 10, and 12 have been amended. Claims 2-3, 5, 7, 9, 11, and 13-18 have been canceled. Claims 1, 4, 6, 8, 10, and 12 have been entered and are presented for examination.
2. Application 10/558,432 is a 371 of PCT/KR04/01152 (05/14/2004) and claims priority to Foreign Applications 10-2004-0022208 (03/31/2004) and 10-2004-0034962 (05/30/2003) from the Republic of Korea.
3. Applicant's arguments, filed September 23rd, 2009, have been carefully considered, but they are not persuasive.

Claim Objections

4. Claim 1 is objected to because of the following informalities: The claim recites "at least first and second electronic devices" and should be changes to ---at least a first and second electronic devices--- or --- at least a first electronic device and a second electronic device---. Appropriate correction is required.
5. Claim 10 is objected to because of the following informalities: The claim recites "a message" and "a command code" in lines 5 and 12 and should be changes to ---the message--- and ---the command code---. Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1, 6, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (A New control Protocol for Home Appliances - LnCP - 2001) in view of Merrick et al. (US 7,028,312).

Regarding claim 1, Lee et al. discloses a network system (**see Figure 1, Network Structure [the network comprises multiple appliances and a network manager]**), comprising: at least a first and second electric devices (**see Figure 1, Network Manger and Refrigerator**); and a network based on a predetermined protocol

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for connecting the first and second electric devices (**see Abstract [the protocol linking all the devices is LnCP and uses the power line as a network bus]**), wherein the first electric device generates and transmits a message (**§3 ¶1 [the master sends the slave a message to begin conversation when an event is generated by the user and has total control over the network; therefore the master generates messages to control the network]**) comprising: a command code field including a command code that is to be performed by the second electric device and an argument field including a number of arguments (**see Figure 9 [and example of a variable length message that includes a command code field with a command code and input and return argument fields for input and return arguments]**), and the second electric device receives the message from the first electric device (**§3 ¶1 [the master sends the slave a message to begin conversation]**), extracts the command code and executes a operation by using the extracted command code and arguments (**§6.1 ¶2 [the slave uses the command field and the argument field to perform the request action or function and sends back an response message with a copy of the command code and the return arguments]**). Lee et al. does not explicitly disclose extracting as many arguments as necessary according to a version of an applied protocol for performing the command code. However, Merrick et al. disclose such features (**column 15, lines 9-31 and column 24, lines 30-48 [arguments are encoded into a message and sent to the server (device) to perform a function with the arguments and to send back the return arguments; the message sent may include more arguments (values) due to an updated version; however, the mechanism allows the service to continue to**

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function with using only information that existed in the previous version; Merrick et al. implicitly implies that the unused values associated with the newer protocol are ignored]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the method of Merrick et al. into the system of Lee et al. The method of Merrick et al. can be implemented by incorporating a mechanism in the other device (refrigerator) that allows for messages sent from the one device (network manager), which uses an updated version of a protocol with more input values to perform a command, to process messages using only the known values of the protocol to perform a command.

The references as applied above do not explicitly disclose the second device discards remaining arguments when the remaining arguments exist. However, in view of the teachings of Merrick et al., it would have been obvious to one of ordinary skill in the art to recognize that the unused arguments, when extracted, should be discarded since they do not affect the action of the device. The motivation for this is to efficiently use the memory of the device by not storing information that is not pertinent in performing the function in the message.

Regarding claim 6, Lee et al. discloses an electric device capable of communicating with another electric device through a network (**see Abstract and see Figure 1, Network Structure [the network comprises multiple appliances and a network manager; the protocol linking all the devices is LnCP and uses the power line as a network bus]**), receiving a message including a command code field

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including a command code that is to be performed by the electric device, and an argument field including a number of arguments (**see Figure 9 [and example of a variable length message that includes a command code field with a command code and input and return argument fields for input and return arguments]**) wherein the electric device is based on a predetermined protocol (**see Abstract [the protocol linking all the devices is LnCP and uses the power line as a network bus]**) comprising: at least a lower layer; and an upper layer (**§2.2 ¶1-2 [the LnCP layering consists of the physical layer, Data Link layer, and the Application layer]**) which is configured to: receive from the lower layer the message (**§2.2 ¶2 [the Data Link layer handles reception of packets over the attached medium]**), extract a command code from the message, and execute the command code using the extracted arguments (**§6.1 ¶2 [the slave uses the command field and the argument field to perform the request action or function and sends back an response message with a copy of the command code and the return arguments]**). Lee et al. does not explicitly disclose extracting as many arguments as necessary according to a version of an applied protocol for performing the command code. However, Merrick et al. disclose such features (**column 15, lines 9-31 and column 24, lines 30-48 [arguments are encoded into a message and sent to the server (device) to perform a function with the arguments and to send back the return arguments; the message sent may include more arguments (values) due to an updated version; however, the mechanism allows the service to continue to function with using only information**

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that existed in the previous version; Merrick et al. implicitly implies that the unused values associated with the newer protocol are ignored])).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the method of Merrick et al. into the system of Lee et al. The method of Merrick et al. can be implemented by incorporating a mechanism in the other device (refrigerator) that allows for messages sent from the one device (network manager), which uses an updated version of a protocol with more input values to perform a command, to process messages using only the known values of the protocol to perform a command.

The references as applied above do not explicitly disclose the second device discards remaining arguments when the remaining arguments exist. However, in view of the teachings of Merrick et al., it would have been obvious to one of ordinary skill in the art to recognize that the unused arguments, when extracted, should be discarded since they do not affect the action of the device. The motivation for this is to efficiently use the memory of the device by not storing information that is not pertinent in performing the function in the message.

Regarding claim 10, Lee et al. discloses a method for processing a message in network system **(see Figure 1, Network Structure [the network comprises multiple appliances and a network manager])** including at least a first and second electric devices **(see Figure 1, Network Manger and Refrigerator)** and a network based on a predetermined protocol for connecting the first and second electric devices **(see Abstract [the protocol linking all the devices is LnCP and uses the power line as a**

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network bus]], the method comprising the steps of: generating and transmitting a message (**§3 ¶1 [the master sends the slave a message to begin conversation when an event is generated by the user and has total control over the network; therefore the master generates messages to control the network]]**) comprising: a command code field including a command code that is to be performed by the second electric device and an argument field including a number of arguments (**see Figure 9 [and example of a variable length message that includes a command code field with a command code and input and return argument fields for input and return arguments]]**), and the second electric device receives the message from the first electric device (**§3 ¶1 [the master sends the slave a message to begin conversation]]**), extracts the command code and executes a operation by using the extracted command code and arguments (**§6.1 ¶2 [the slave uses the command field and the argument field to perform the request action or function and sends back an response message with a copy of the command code and the return arguments]]**). Lee et al. does not explicitly disclose extracting as many arguments as necessary according to a version of an applied protocol for performing the command code. However, Merrick et al. disclose such features (**column 15, lines 9-31 and column 24, lines 30-48 [arguments are encoded into a message and sent to the server (device) to perform a function with the arguments and to send back the return arguments; the message sent may include more arguments (values) due to an updated version; however, the mechanism allows the service to continue to function with using only information that existed in the previous version; Merrick**

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et al. implicitly implies that the unused values associated with the newer protocol are ignored]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the method of Merrick et al. into the system of Lee et al. The method of Merrick et al. can be implemented by incorporating a mechanism in the other device (refrigerator) that allows for messages sent from the one device (network manager), which uses an updated version of a protocol with more input values to perform a command, to process messages using only the known values of the protocol to perform a command.

The references as applied above do not explicitly disclose the second device discards remaining arguments when the remaining arguments exist. However, in view of the teachings of Merrick et al., it would have been obvious to one of ordinary skill in the art to recognize that the unused arguments, when extracted, should be discarded since they do not affect the action of the device. The motivation for this is to efficiently use the memory of the device by not storing information that is not pertinent in performing the function in the message.

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10. Claims 4, 8, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (A New control Protocol for Home Appliances - LnCP - 2001) in view of Merrick et al. (US 7,028,312) as applied to claims 1, 6, and 10 above, and further in view of Theeten (US 6,968,553).

Regarding claim 4, Lee et al. further discloses executing the extracted command code and arguments in the sent message (**§6.1 ¶2 [the slave uses the command field and the argument field to perform the request action or function and sends back an response message with a copy of the command code and the return arguments]**). The references as applied above do not explicitly disclose setting deficient arguments as predetermined values when arguments in the argument field of the message are deficient. However, Theeten discloses such a feature (**column 12, lines 38-43 [the device replaces the placeholder arguments in the "in Arg" arguments with the value of the corresponding arguments in the argument list that corresponds to a command]**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the method of Theeten into the system of the references as applied above. The method of Theeten can be implemented by enabling the slave device to access a argument list associated with a command. The motivation for this is to determine whether proper argument values are used and if not to replace the argument.

Regarding claim 8, Lee et al. further discloses executing the extracted command code and arguments in the sent message (**§6.1 ¶2 [the slave uses the command field**

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and the argument field to perform the request action or function and sends back an response message with a copy of the command code and the return arguments]]). The references as applied above do not explicitly disclose setting deficient arguments as predetermined values when arguments in the argument field of the message are deficient. However, Theeten discloses such a feature (**column 12, lines 38-43 [the device replaces the placeholder arguments in the "in Arg" arguments with the value of the corresponding arguments in the argument list that corresponds to a command]]**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the method of Theeten into the system of the references as applied above. The method of Theeten can be implemented by enabling the slave device to access a argument list associated with a command. The motivation for this is to determine whether proper argument values are used and if not to replace the argument.

Regarding claim 12, Lee et al. further discloses executing the extracted command code and arguments in the sent message (**§6.1 ¶2 [the slave uses the command field and the argument field to perform the request action or function and sends back an response message with a copy of the command code and the return arguments]]**). The references as applied above do not explicitly disclose setting deficient arguments as predetermined values when arguments in the argument field of the message are deficient. However, Theeten discloses such a feature (**column 12, lines 38-43 [the device replaces the placeholder arguments in the "in Arg"**

arguments with the value of the corresponding arguments in the argument list that corresponds to a command])).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the method of Theeten into the system of the references as applied above. The method of Theeten can be implemented by enabling the slave device to access a argument list associated with a command. The motivation for this is to determine whether proper argument values are used and if not to replace the argument.

Response to Arguments

11. On pages 5-6 of the Remarks, Applicant argues that neither Lee et al. nor Merrick et al. discloses "the second electric device receives the message from the first electric device, ... discards remaining arguments when the remaining arguments exist, and executes a operation by using the extracted command code and arguments." However, the examiner respectfully disagrees.

12. Lee et al. discloses "the second electric device receives the message from the first electric device" (**§3 ¶1 [the master sends the slave a message to begin conversation])** and "extracts the command code and executes a operation by using the extracted command code and arguments" (**§6.1 ¶2 [the slave uses the command field and the argument field to perform the request action or function and sends back an response message with a copy of the command code and the return arguments])**).

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13. Merrick et al. disclose that arguments are encoded into a message and sent to the server (device) to perform a function with the arguments and to send back the return arguments and that the message sent may include more arguments (values) due to an updated version. The mechanism allows the service to continue to function with using only information that existed in the previous version (implicitly implies that the unused values associated with the newer protocol are ignored]) (**column 15, lines 9-31 and column 24, lines 30-48**).

The references as applied above do not explicitly disclose the second device discards remaining arguments when the remaining arguments exist. However, in view of the teachings of Merrick et al., it would have been obvious to one of ordinary skill in the art to recognize that the unused arguments, when extracted, should be discarded since they do not affect the action of the device.

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER T. WYLLIE whose telephone number is (571) 270-3937. The examiner can normally be reached on Monday through Friday 8:30am to 6:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher T. Wyllie/
Examiner, Art Unit 2465

/John Pezzlo/

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Primary Examiner, Art Unit 2465